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The impact of hospital brand image on service quality, patient satisfaction and loyalty

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In the competitive health care industry, the impact of hospital brand image on the attitudes and behaviours of patients towards hospitals has become an important issue. The aim of this study is to examine the relationship among hospital brand image, service quality, patient satisfaction, and loyalty. Survey data gathered from large private hospitals in Taiwan are used to test the relationship. The results reveal that hospital brand image has both direct and indirect effects on patient loyalty. It means that a positive hospital brand image not only increases patient loyalty directly, but it also improves patient satisfaction through the enhancing of perceived service quality, which in turn increases the re-visit intention of patients. Hospital brand image indeed serves as a lead factor in enhancing service quality, patient satisfaction, and patient loyalty. In addition, the results imply that the path from service quality to patient satisfaction is a key avenue for the impact of hospital brand image on patient loyalty. Consequently, this study proposes that hospital managers should strive to create and maintain the positive hospital brand image in order to enhance service quality, patient satisfaction, and loyalty. Several strategies regarding the creation and maintenance of the positive hospital brand image are also suggested in this study.

Key words: Hospital brand image, service quality, patient satisfaction, loyalty.

INTRODUCTION

In the competitive market, branding is a valuable intangible asset of a company. Branding plays an important role because positive brands will enable customers to better visualize and understand products, reduce customers' perceived risks in buying services (Kim et al., 2008a), and help companies achieve sustained superior performance. In particular, brand image is a critical issue in the field of brand management. Research interest is growing among academics and practitioners in the topics of brand image's antecedents and outcomes. The proposition that a strongly positive brand image allows a corporation to gain reputational value and competitive advantage (Porter and Claycomb, 1997) nurtures this growth. A favourable brand image increases various outcomes such as customer satisfaction, service quality, loyalty, and repurchasing intention (Bloemer et al., 1998; Da Silva and Alwi, 2008; Lai et al., 2009).

Health care institutions face unique challenges around the world. An increasing number of hospitals face extremely competitive environments owing to open-door policies in the medical service market (Kim et al., 2008b). The growth of senior citizens population and growing focus on health are dynamically increases particular health wants and needs within the general populace. The current medical service market favours the buyer, rather than the seller (Lee et al., 2010). Hence, the field of medical service is now emphasizing the importance of customer-oriented marketing. Hospitals endeavour to establish marketing strategies which promote brand image among patients for enhancing the satisfaction and loyalty of patients as well as further promoting performance.

In general, the research of brand image mostly focuses on corporate context such as goods producing firms, service firms, and retail stores (Bloemer and de Ruyter, 1998; Nguyen and LeBlanc, 1998; Lai et al., 2009). Although hospital brand image is becoming an increasingly important issue in the competitive health care industry (Javalgi et al., 1992), few studies are available in this field. Further, no studies investigate how the hospital brand image impacts the attitudes and behaviours of

patients towards hospitals. Thus, exploring the complex relationship among the hospital brand image and its influence on the intentions of patients is necessary. That is the purpose of this study, and the details are as follows. First, the study provides an integrated model that explains the relationship among hospital brand image, service quality, patient satisfaction, and loyalty. Next, the correlations among these constructs within the integrated model are examined systematically. Finally, the results of this study include new marketing implications for hospitals to nurture positive brand images.

THEORETICAL DEVELOPMENT AND RESEARCH HYPOTHESES

Hospital brand image

The brand is a valuable intangible asset, which is difficult to imitate, and which is helpful to achieve sustained superior performance (Roberts and Dowling, 2002). Brand image is a composite of perceived quality and esteem dimensions (Yagci et al., 2009). In other words, brand image is a perception of a brand held in customer memory and reflecting a customer's overall impression. A positive brand image can be considered as a crucial ability of a corporation to hold its market position.

In the health care context, Kotler and Clarke (1987) suggested that hospital brand image is the sum of beliefs, ideas, and impressions that a patient holds toward a hospital. A brand image of a hospital is not absolute; it is relative to brand images of competing hospitals. The patients often form a brand image of a hospital from their own medical examination and treatment experiences (Kim et al., 2008a). Furthermore, hospital brand image possesses a strategic function. Through strategic marketing activities, the brand image of a hospital can be used to help it improve its competitive position (Javalgi et al., 1992). Thus, a favourable hospital brand image helps strengthen the intentions patients have for selecting a hospital.

Service quality

Service quality which can be viewed as one of the important factors in business management has been extensively discussed and emphasized within both the academic and commercial fields (Chen and Chen, 2010; Liu and Tsai, 2010). The definition of service quality is the customer's overall impression or assessment concerning the relative inferiority or superiority of the organization and its services (Zeithaml, 1988; Bitner and Hubbert, 1994). It can be measured by the comparison of customers' expectations with customers' perceptions of actual service performance (Parasuraman et al., 1985). Customers form expectations prior to their encounter with

the services. They develop perceptions during the process of service delivery, and then they compare their perceptions to their expectations in evaluating the outcome of the service encounter. Specifically, service quality means that the service delivery should fulfill customers' requirements and expectations (Tan et al., 2010). According to aforementioned perspectives, service quality can be viewed as a measurement of how well the service level delivered conforms to customers' expectations.

In terms of health care, service quality can be defined as a gap between patients' expectations and perceptions (Woodside et al., 1989). Expectations are treated as what the patients think should be offered in the medical services, and perceptions can be considered as the evaluation of patients regarding specific medical service attributes relative to their expectations. Operationally, the service quality of hospital depends upon the balance of perceptions and expectations of patients. Moreover, Lytle and Mokva (1992) proposed that service quality satisfies the needs of patients, and patients evaluate a hospital's service quality from its service output, service process, and physical environment.

Patient satisfaction

Oliver (1997) noted that satisfaction is a general psychological state which is about the expectation for emotions and experience from shopping behaviour. In the service environment, customer satisfaction has been seen as a special form of customer attitude. It is a phenomenon of post-purchase reflection on how much the customer likes or dislikes the service after experiencing it (Woodside et al., 1989), and it can be treated as a fulfillment of consumptive goals as experienced and described by customers (Oliver, 2006). Furthermore, the strategic importance of customer satisfaction for organizations is even more highlighted (Wang and Pho, 2009; Khattak and Rehman, 2010).

In the field of medical service, Kim et al. (2008b) adopted the concept of customer satisfaction and defined that patient satisfaction is the judgment of perceived value and sustained response toward service related stimulus before, during or after the consumption of medical services by a patient. Patient satisfaction is concerned with the degree to which the expectations of a patient are fulfilled by the medical services. Moreover, patient satisfaction is a critical indicator for medical service industry. Providers of medical services need to understand the patients' expectations and try to meet them (Lee et al., 2010). For hospitals, satisfied patients are important because they are more likely to keep using medical services, follow the prescribed treatment plan, and maintain the relationship with a specific health care provider, and recommend the hospital to others (Hekkert et al., 2009). Undoubtedly, patient satisfaction is the passport to

profitability in the hospital setting.

Loyalty is a positive propensity for an organization or brand (Da Silva and Alwi, 2008). In general, loyalty has been considered in various ways, such as positive word-of-mouth, repurchase intention and so on. Dick and Basu (1994) firstly suggested that the concept of loyalty can be conceptualized as a two-dimensional construct, including attitude and behaviour. Subsequently, East et al. (2000) explained that loyalty is closer to a behavioural intention rather than an attitude. On the other hand, Buttle and Burton (2002) argued that loyalty is probably better seen as attitude than behaviour. In spite of the arguments about whether loyalty should be conceptualized as attitude, behaviour or both, it is apparent that most studies have conceptualized loyalty as a behavioural intention or behavioural response (Shukla, 2004).

Several studies used re-visit intention as a surrogate for patient loyalty in the health care environment (Boshoff and Gray, 2004; Kim et al., 2008b). Patient loyalty may be more appropriate viewed as a behavioural intention. Regardless of whether the discussion focuses on patient loyalty in the health care context or customer loyalty in the general service context, there is no question that the same benefits of customer loyalty apply to a hospital as they do to a bank or retail business. In fact, loyalty has been illustrated as the market place currency for the twenty-first century (Singh and Sirdeshmukh, 2000). Hence, patient loyalty acts as a competitive asset for the hospital.

The relationship among hospital brand image, service quality, patient satisfaction, and loyalty

In this section, the relationship among hospital brand image, service quality, patient satisfaction, and loyalty are discussed. The research hypotheses are developed as follows.

Brand image was viewed as an important factor in the service evaluation (Bitner, 1991). There is ample evidence that image significantly affects customers' evaluative judgments such as perceptions of quality (Darden and Schwinghammer, 1985; Andreassen and Lindestad, 1998). Moreover, Bloemer et al. (1998) investigated the image related issues in banks and pointed out that a positive brand image of a bank significantly improves perceived service quality. That is, brand image is a critical determinant of service quality. Translated to the health care context, it is likely that a favourable hospital brand image increases service quality perceived by a patient. Thus, the first hypothesis is described as follow:

H_1: Hospital brand image has a positive effect on service quality.

In the branding literature, there is a general assumption that a favourable brand image has a positive impact on customer satisfaction. Andreassen and Lindestad (1998) proposed that image affects customer satisfaction through a filtering effect. Likewise, Davies et al. (2003) suggested that brand image correlates with customer satisfaction. Brand image has been recognized as an important antecedent of customer satisfaction. Hence, a positive hospital brand image will tend to generate high patient satisfaction in the hospital. The second hypothesis is described as follows:

H_2: Hospital brand image has a positive effect on patient satisfaction.

In addition, it is apparent from preceding studies that brand image has direct and/or indirect positive effects on loyalty or behavioural intention. Merrilees and Fry (2002) discovered that brand image has a direct effect on loyalty. Davies and Chun (2002) found, in contrast, that brand image has an indirect influence on loyalty via customer satisfaction. Moreover, brand image could have both direct and indirect effects on loyalty (Andreassen and Lindestad, 1998; Hart and Rosenberger, 2004; Da Silva and Alwi, 2008). Nevertheless, brand image can be certainly viewed as a predictor of customer loyalty. Thus, in the hospital context, a positive hospital brand image appears to stimulate patient loyalty. The third hypothesis is thus:

H_3: Hospital brand image has a positive effect on loyalty as measured by re-visit intention.

Several studies examined links between service quality and customer satisfaction. They found that high service quality correlates with high customer satisfaction in the general service context (Spreng et al., 1996; Cronin et al., 2000; Oyeniyi and Joachim, 2008). In the field of health care, the issue about relationship between service quality and patient satisfaction was also discussed. Ware et al. (1978) initially noted that patient satisfaction is affected by the characteristics of the service providers and medical services. Subsequently, Woodside et al. (1989) verified that patient satisfaction serves as a medium between service quality and behavioural intention. Kim et al. (2008b) suggested that medical service quality such as medical doctor, procedure of care, and reliability has a positive influence upon patient satisfaction. Lee et al. (2010) found a positive correlation exists between medical service quality and patient satisfaction. In addition, Yeşilada and Direktör (2010) pointed out that service quality has a significantly positive effect on patient satisfaction in public and private hospitals. Therefore, service quality perceived by a patient will induce patient satisfaction. The fourth hypothesis is described as follow:

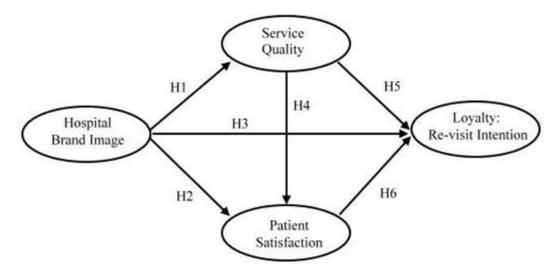H_4: Service quality has a positive effect on patient satisfaction.

Figure 1. Research model.

Previous studies indicated that service quality has a significantly positive impact on loyalty. When products or services exceed the expectations of customers, their repurchase intention will increase (Boulding et al., 1993; Cronin et al., 2000). The excellent service quality contributes to customer retention and loyalty (Potluri and Zeleke, 2009). In the health care context, Boshoff and Gray (2004) verified a positive relationship between service quality and loyalty as measured by buying intentions. Hence, service quality perceived by a patient will affect patient loyalty. The fifth hypothesis is described as follow:

H5: Service quality has a positive effect on loyalty as measured by re-visit intention.

In a review of earlier studies, loyalty can be an outcome of customer satisfaction (Oliver, 1997; Lai et al., 2009). A meta-analysis revealed that a positive significant correlation between satisfaction and repurchase was found in 15 of the 17 correlations studied (Szymanski and Henard, 2001). In the health care environment, a positive relationship has been noted between patient satisfaction and loyalty (Woodside et al., 1989; Fisk et al., 1990). Furthermore, Kim et al. (2008b) examined the correlation between patient satisfaction and re-visit intention in a large-sized hospital, and found that the influence of patient satisfaction on re-visit intention is significant. Therefore, it is most likely that satisfied patients will be more loyal to their hospital. The sixth hypothesis is described as follow:

H6: Patient satisfaction has a positive effect on loyalty as measured by re-visit intention.

According aforementioned discussion, the research model for this study is constructed to explain the

relationship among hospital brand image, service quality, patient satisfaction, and loyalty. The model is shown in Figure 1.

METHODS

Sampling and data collection

The survey sample for this study was obtained from patients in two large-sized private hospitals located in Taiwan. Owing to the constraint of research budget, 500 patients were randomly selected from the database of patients. The self-administrative question-naires were delivered to selected patients by research assistants. A cover letter regarding the purpose of this study was included in each questionnaire. The questionnaires do not ask for the names of the respondents and assure the respondents that their responses are being used only for academic research. In addition, a number of gifts were provided to patients participating in this study to enhance their willingness to complete the questionnaires.

In total, 462 among 500 distributed questionnaires were returned. Out of those, 25 were unusable questionnaires due to incomplete answers or missing data. Consequently, 437 usable questionnaires were ultimately used for further statistical analysis. Among the respondents, 52.4% were female, 61.2% were between the ages of 40 and 60, and 43.5% had graduated from colleges or university.

Measures

Likert-type scales of seven points were used to the latent constructs considered in this study (1 = "strongly disagree" and 7 = "strongly agree"). The construct of hospital brand image was measured using six items modified from the scale proposed by Kim et al. (2008a). The modified scale consists of a good reputation of the hospital (HBI1), excellent facilities (HBI2), comfortable environment (HBI3), trust in the hospital (HBI4), proper attitudes of doctors (HBI5), and the most advanced medical equipment (HBI6).

The measurement of service quality used in this study was based upon a modification of the SERVQUAL instrument developed by Parasuraman et al. (1988). The SERVQUAL instrument was often used to measure medical service quality (Boshoff and Gray, 2004;

Table 1. Convergent validity.

Construct	Item	Standardized loading
Hospital brand image	HBI1	0.766^{***}
	HBI2	0.649^{***}
	HBI3	0.655^{***}
	HBI4	0.726^{***}
	HBI5	0.626^{***}
	HBI6	0.773^{***}
Service quality	SQ1	0.642^{***}
	SQ2	0.669^{***}
	SQ3	0.757^{***}
	SQ4	0.670^{***}
	SQ5	0.750^{***}
Patient satisfaction	PS1	0.790^{***}
	PS2	0.713^{***}
	PS3	0.662^{***}
Re-visit intention	RI1	0.837^{***}
	RI2	0.859^{***}

$^{***}p<0.001$.

de Jager et al., 2010). In particular, a short version SERVQUAL scale proposed by Lai et al. (2009) was modified in this study in order to better reflect the service received in a hospital setting. The five elements of modified SERVQUAL, such as tangible (SQ1), responsiveness (SQ2), reliability (SQ3), assurance (SQ4), and empathy (SQ5), were used to measure service quality perceived by patients.

Kim et al. (2008b) suggested that the survey of patient satisfaction used in a multiple item can more accurately be measured with diverse attributes. Thus, patient satisfaction was measured using the three-item version of the scale developed by Kim et al. (2008b) in this study. The scale is composed of satisfaction toward hospital service (PS1), satisfaction toward utility intention (PS2), and the expected satisfaction toward future re-visit (PS3). With regard to loyalty, re-visit intention was used as a surrogate measure of patient loyalty. The re-visit intentions of patients were measured with two items scale proposed by Kim et al. (2008b). These items include preferential consideration for re-visit (RI1), and re-visit intention at a relatively higher medical service fee (RI2).

RESEARCH RESULTS

The structure equation model (SEM) was used to examine the hypotheses in this study. A two-step process of analysis (Anderson and Gerbing, 1988) with Amos 7.0 statistical package was implemented. In the first step, the measurement model was used to assess the validity and reliability. The fit of a confirmatory factor analysis (CFA) to the observed data was evaluated to determine if the items loaded on their respective scales. In the second step, the structural model was employed to test the hypotheses. The results were described as follows.

Measurement model

The results of measurement model show an adequate fit to the data, χ^2 (df = 98) = 230.710, p < 0.001; GFI = 0.943; CFI = 0.948; TLI = 0.937; RMSEA = 0.056. Regarding convergent validity, the fact that all factor loadings for the items measuring the same construct are statistically significant can be viewed as evidence supporting the convergent validity of those items (Anderson and Gerbing, 1988). Table 1 demonstrates that estimate of standardized loading for each item was statistically significant, and provides the support of convergent validity.

On the other hand, a series of χ^2 difference tests was used to assess discriminate validity. This was done for a pair of constructs at a time by constraining the estimated correlation parameter between them to 1, and then performing a χ^2 difference test on the values obtained for the constrained and unconstrained models. The resulting significant difference in χ^2 indicates that the two constructs are not perfectly correlated and that discriminate validity is achieved (Anderson and Gerbing, 1988). According to Table 2, all of the χ^2 differences are statistically significant in this study, which is viewed as a good evidence for the discriminate validity.

In addition to validity, reliability is essentially an evaluation of measurement accuracy. The Cronbach's alpha was used to analyze the reliability of each construct. Table 3 shows means, standard deviations, alpha reliabilities, and correlations among all constructs in this study. The Cronbach's alpha internal consistency reliability

Table 2. Discriminate validity.

Model	χ2	df	Δχ2	Δdf
Unconstrained model	230.710	98		
Constrained model:				
Hospital brand image - Service quality	452.178	99	221.468[***]	1
Hospital brand image - Patient satisfaction	461.967	99	231.257[***]	1
Hospital brand image - Re-visit intention	439.050	99	208.340[***]	1
Service quality - Patient satisfaction	424.749	99	194.039[***]	1
Service quality - Re-visit intention	427.817	99	197.107[***]	1
Patient satisfaction - Re-visit intention	390.693	99	159.983[***]	1

[***]p<0.001

Table 3. Means, standard deviations, reliabilities, and correlations among constructs.

S/No.	Construct	M	S.D	1	2	3	4
1.	Hospital brand image	3.49	0.470	(0.778)			
2.	Service quality	3.40	0.501	0.619**	(0.736)		
3.	Patient satisfaction	3.43	0.452	0.203*	0.683**	(0.763)	
4.	Re-visit intention	3.28	0.656	0.485**	0.247*	0.592**	(0.835)

Values in parentheses indicate the Cronbach's alpha reliability estimates. N = 437. *p<0.05; **p<0.01.

reliability estimates ranged from 0.736 to 0.835, which is an acceptable level (Nunnally, 1978). Thus, the measures are reliable.

As with all self-reported data, common method variance may potentially occur. In order to evaluate the common method variance, a one-factor test was used in this study (Podsakoff and Organ, 1986). A worse fit for a one-factor model with all items loading on a single construct suggests that common method variance does not pose a serious threat (Lai et al., 2009). The analytical result indicates that the one-factor test generates a χ^2 ($df = 104$) = 471.901, $p < 0.001$; GFI = 0.827; CFI = 0.813; TLI = 0.795; RMSEA = 0.16. Apparently, the fit of one-factor model is much worse than the proposed measurement model (difference in χ^2 = 241.191, $df = 6$, $p < 0.001$). Thus, the common method variance is not a serious problem in this study.

Structural model testing

The six hypotheses were tested by using a structural model in this study. Overall, this model provides an acceptable fit to the data, χ^2 ($df = 98$) = 230.710, $p < 0.001$; GFI = 0.943; CFI = 0.948; TLI = 0.937; RMSEA = 0.056. The parameters of the structural paths in the full structural model were further estimated. As shown in Figure 2, the results indicate that hospital brand image

has a significantly positive impact on service quality, and H_1 was supported ($\beta = 0.701$, $p < 0.001$). H_2 predicted that hospital brand image has a positive effect on patient satisfaction, but this hypothesis was not supported ($\beta = 0.065$, $p > 0.05$). H_3 postulated that hospital brand image positively influences re-visit intention, and this hypothesis was supported ($\beta = 0.329$, $p < 0.05$). Regarding H_4, service quality was positively associated with patient satisfaction, thereby supporting H_4 ($\beta = 0.757$, $p < 0.001$). H_5 predicted that service quality has a positive impact on re-visit intention, but this hypothesis was not supported ($\beta = 0.012$, $p > 0.05$). Finally, patient satisfaction was found to positively influence re-visit intention, and H_6 was supported ($\beta = 0.668$, $p < 0.001$).

DISCUSSION

The main purpose of this study is to examine the relationship among hospital brand image, service quality, patient satisfaction, and re-visit intention. Results from the hypotheses testing suggest the following information. First, examining the impact of hospital brand image is a critical issue in this study. Result demonstrates both direct and indirect influences of hospital brand image on re-visit intention. The finding is consistent with the preceding study suggesting that brand image has both direct and indirect effects on loyalty (Andreassen and Lindestad, 1998). The direct and indirect effects for

Figure 2. Results of hypotheses testing.
*p<0.05; **p<0.01; ***p<0.001; not significant. Solid path: significant. Dotted path: non-significant.

Table 4. Standardized effects.

Path	Direct effect	Indirect effect	Total effect
Hospital brand image → Service quality	0.701	0	0.701
Hospital brand image → Patient satisfaction	0.065	0.531	0.596
Hospital brand image → Re-visit intention	0.329	0.406	0.735
Service quality → Patient satisfaction	0.757	0	0.757
Service quality → Re-visit intention	0.012	0.506	0.518
Patient satisfaction → Re-visit intention	0.668	0	0.668

hospital brand image on re-visit intention not only suggest that image plays a vital role in creating service quality, patient satisfaction, and loyalty, but also show that hospital brand image directly affects re-visit intention. With total effect value 0.735 as stated in Table 4, hospital brand image is indicated as a strong predictor to patient loyalty. Obviously, hospital brand image is a key factor in enhancing service quality, patient satisfaction, and patient loyalty.

Secondly, the comparison between direct effect and indirect effect of hospital brand image on re-visit intention is further considered. The positive effects are shown in the verifications among hospital brand image and service quality (β = 0.701, p < 0.001), service quality and patient satisfaction (β = 0.757, p < 0.001), patient satisfaction and re-visit intention (β = 0.668, p < 0.001), as well as hospital brand image and re-visit intention (β = 0.329, p < 0.05). The path coefficient between hospital brand image and re-visit intention reveals a considerably smaller value than the other path coefficients. Moreover, Table 4 shows that the value of indirect effect is larger than direct effect in the relationship between hospital brand image and re-visit intention (0.406 > 0.329). Compare with indirect

effect, therefore, the direct effect of hospital brand image on re-visit intention is lower. The result also supports previous study showing that brand image has a substantial indirect effect and a marginally significant direct effect on loyalty (Hart and Rosenberger, 2004). Regarding the indirect effect of hospital brand image on re-visit intention, the result reveals a long path which contains several constructs. A positive hospital brand image initially increases service quality perceived by a patient. And then, higher service quality significantly enhances patient satisfaction, which in turn improves patient loyalty. This result is consistent with the study by Bloemer et al. (1998) who found the mediating effects of service quality and satisfaction in the relationship between brand image and loyalty. The brand image has an impact on satisfaction via service quality, and then, service quality has an effect on loyalty via satisfaction. On the other hand, the result shows a direct effect of hospital brand image on re-visit intention. This finding is also consistent with earlier study showing that brand image has a significantly direct impact on loyalty (Merrilees and Fry, 2002).

Finally, service quality and patient satisfaction serve as

important mediators in the relationship between hospital brand image and re-visit intention. Particularly, the path coefficient between service quality and patient satisfaction ($\beta = 0.757$, $p < 0.001$) shows a largest value among all path coefficients. This finding implies that the path from service quality to patient satisfaction is a critical avenue for the influence of hospital brand image on patient loyalty. In addition, service quality does not have a significantly direct effect on re-visit intention, but has a significantly indirect effect on re-visit intention through patient satisfaction. The result reveals that a patient's satisfaction or dissatisfaction toward the quality of services has an influence on re-visit intention. Further-more, this finding is consistent with prior study indicating that patient satisfaction plays a key mediating role between service quality and re-visit intention (Woodside et al., 1989; Kim et al., 2008b). In short, service quality and patient satisfaction are helpful for linking hospital brand image to patient loyalty.

IMPLICATIONS

This study examines a model combing hospital brand image, service quality, patient satisfaction, and loyalty. Four of the six research hypotheses examined in this study were found to be supported. The results of this study could help hospital managers better understand the inter-relationship among hospital brand image, service quality, patient satisfaction, and re-visit intention, as well as the mechanism for improving patient loyalty. In addition, the results generally reinforce past studies regarding hospital marketing and related issues. Several implications drawn from these results are described as follows.

First, hospital brand image acts as a main antecedent within the integrated model. A favourable hospital brand image not only stimulates patient loyalty directly, but also enhances patient satisfaction through the improvement of perceived service quality, which in turn promotes the re-visit intention of patients. In the competitive health care environment, thus, hospitals should focus their marketing efforts on effective brand management. Specifically, hospital managers should pay more attention to constructing the positive hospital brand image. The managers have to fully understand that the formation of a positive hospital brand image is valuable to increasing perceived service quality and patient satisfaction, and hence, it encourages patient loyalty. Further, several integrated marketing strategies such as advertising, public relations, communication with patients, service training, and internet marketing should be implemented to create and maintain the brand image. For instance, the use of advertising to create the perception of a strong medical institution with specialized medical services and modern facilities is helpful for the establishment of brand image toward a hospital. In sum, the creation and

maintenance of a positive hospital brand image could allow a hospital to gain a competitive advantage in the competitive health care industry.

Next, the research results reveal that service quality and patient satisfaction play major mediating roles between hospital brand images and re-visit intention. Furthermore, service quality indirectly affects re-visit intention through patient satisfaction. In this case, service quality is a very efficient vehicle to improve patient satisfaction, which in turn enhances patient loyalty. Hospital managers should plan and implement patient-oriented service strategies for medical services and hope that these strategies will lead to higher patient satis-faction and loyalty. The patient-oriented service strategies are important for providing high level of medical services and must be carried out in multidimensional aspects, including assurance, empathy, responsiveness, reliability, and tangibles.

Regarding assurance, it is important to assure patients that they will obtain their desired level and quality of services at the time they are admitted to the hospital. All medical staffs have to demonstrate excellent professio-nalism, technical skills, efficacy, and courtesy in order to gain the patients' confidence in the hospital. On the issue of empathy, the medical staffs should put emphasis on the performance of soft skills, such as providing indivi-dualized attention, understanding patients' needs, giving caring concerns and so on. On the aspect of responsive-eness, being swift and responsive to patients' requests, and communicating with them openly are essential components of medical service delivery. Relating to reliability, the medical staffs ought to put efforts into the correct and dependable performance of medical services, such as registration, therapy, aftercare, and follow-up for patients. With respect to tangibles, hospitals must strive to provide and maintain the cleanliness of environment, the neatness of buildings, the decoration of wards, and the appearance of medical staffs.

Finally, the limitations of this study should be noted. First, the range of medical services provided by hospitals varies. This study was conducted at the large-sized private hospitals in Taiwan, and hence the results of this study may not be applicable in other settings. Secondly, several important constructs that may affect patient loyalty are not considered in current model, such as perceived value and trust. In spite of these limitations, there are no other studies on the influence of hospital brand image. This study carefully treats the complex relationship among hospital brand image, service quality, patient satisfaction, and loyalty. The results of this study clearly indicate that hospital brand image is important in determining various outcomes in the field of health care, and offer a useful avenue for improving patient satisfaction and loyalty. For future studies, the integrated model can be replicated with a variety of hospital types or other settings in order to verify it applicability. Besides, additional constructs can be included in the model to

determine their relationship with hospital brand image.

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